



State of New Jersey

Department of Environmental Protection
PO Box 402
Trenton, NJ 08625-0402

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner
Tel. # (609) 292-2885
Fax # (609) 292-7695

February 13, 2004

The Honorable Michael O. Leavitt
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue
Washington, D.C. 20460

Dear Administrator Leavitt:

The federal Clean Air Act requires that New Jersey recommend to the United States Environmental Protection Agency (USEPA) which areas of the State should be included in a nonattainment area designation for fine particulate matter (PM_{2.5}) either because they exceed, or contribute to the exceedence of, the 24-hour or annual PM_{2.5} National Ambient Air Quality Standards (NAAQS). On behalf of Governor James E. McGreevey, this letter sets forth New Jersey's recommendation for areas to be designated as nonattainment for the annual health-based PM_{2.5} standard. New Jersey is presently in compliance with the 24-hour PM_{2.5} standard.

Although the USEPA is requiring that states make these nonattainment area recommendations by no later than February 15, 2004, your staff has yet to propose the Implementation Rule for PM_{2.5} that would provide the states with the PM_{2.5} requirements for, among other things, New Source Review (NSR) and Reasonably Available Control Technology (RACT). As such, you are requiring states to make nonattainment area recommendations without full knowledge of the implications for nonattainment areas. As such, while I am making this recommendation now to meet your deadline, I reserve the right to modify my recommendation after reviewing your final PM_{2.5} Implementation Rule.

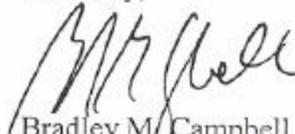
Under the Clean Air Act, a nonattainment area is defined as an area that either does not meet the NAAQS or that significantly contributes to ambient air quality in a nearby area that does not meet the NAAQS. New Jersey is currently monitoring violations of the annual PM_{2.5} standard in Hudson and Union Counties. Further analysis by the New Jersey Department of Environmental Protection provides evidence that Bergen, Essex, Mercer, Middlesex, Monmouth, Morris, Passaic and Somerset Counties may contribute significantly (more than 1 percent) to the monitored violations in New Jersey, and therefore should be included in any nonattainment area. We have previously shared this technical analysis with your staff. Based on this information, I recommend that all ten (10) of these counties be included in New Jersey's nonattainment area. New Jersey will

re-evaluate the contributory aspect of its recommendation when the USEPA finalizes its Implementation Rule for PM_{2.5}. Figure 1 depicts the recommended Northern New Jersey nonattainment area.

New Jersey is not recommending a nonattainment area in Southern New Jersey at this time. Specifically, no monitors in Southern New Jersey are currently detecting violations of the annual PM_{2.5} standard. There is also no evidence that any county in South Jersey is contributing to the monitored violations of the standard in the Philadelphia region. In addition, New Jersey feels that designation of the area as nonattainment is unnecessary, since the State intends to propose reasonable control measures statewide for all relevant stationary and mobile sources. This will allow New Jersey to achieve PM_{2.5} reductions throughout New Jersey, as well as in the Northern New Jersey nonattainment area.

Thank you for your consideration of our recommendation. We look forward to working with you on the completion of the nonattainment designations and efforts to reduce fine particulate matter emissions and attain the air quality standard.

Sincerely,



Bradley M. Campbell
Commissioner

Enclosure

- c: The Honorable James E. McGreevey, Governor State of New Jersey
- The Honorable George E. Pataki, Governor State of New York
- The Honorable Edward G. Rendell, Governor Commonwealth of Pennsylvania
- The Honorable Erin Crotty, Commissioner, NYSDEC
- The Honorable Kathy McGinty, Secretary, PADEP
- The Honorable Jane Kenny, Administrator, USEPA Region II
- The Honorable Jeff Holmstead, Assistant Administrator, USEPA
- The Honorable Peter C. Harvey, New Jersey Attorney General
- The Honorable Jack Lettiere, Commissioner, NJDOT

bc: S. Wolfe
B. O'Sullivan
E. Choromanski
C. Salmi
B. Stern
T. Key
R. Papalski
C. Schell
H. Geduldig
Environmental Regulation File
Division of Air Quality File
Air Quality Management File
Bureau of Air Quality Planning (Official SIP File)

**Figure 1: New Jersey Recommendation for
10-County Annual PM2.5 Nonattainment
Area in Northern New Jersey**



**Designating
Non-Attainment Areas
for the
Fine Particulate
Standard
(PM_{2.5})**

New Jersey Department of Environmental Protection

Bureau of Air Quality Planning

December, 2003

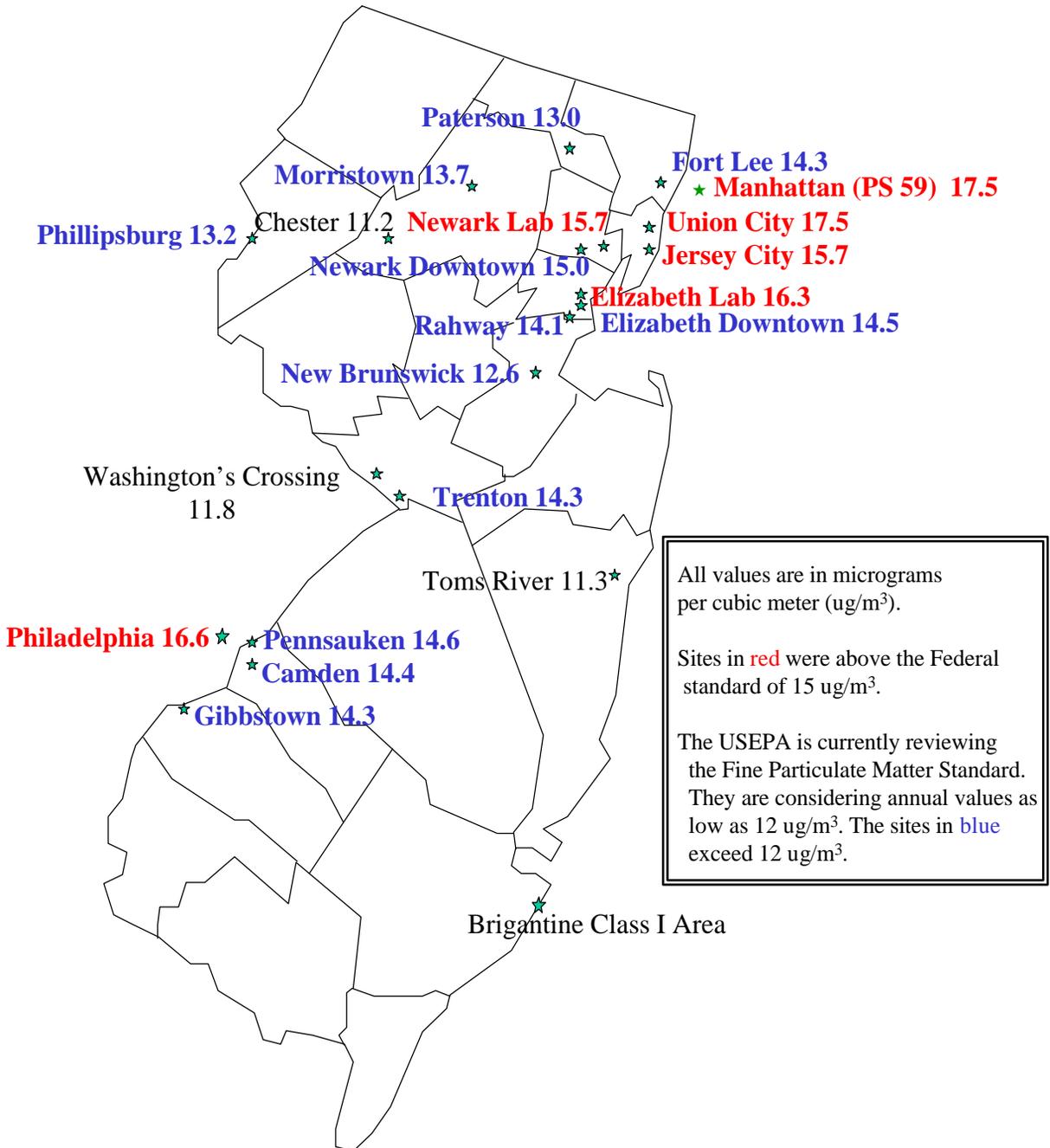
Background

- EPA promulgated standard in 1997
 - 24 hour standard: 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
 - Annual standard: 15 $\mu\text{g}/\text{m}^3$
 - NJ exceeds annual standard by up to about 2 $\mu\text{g}/\text{m}^3$
 - NJ does not exceed the 24 hour standard
- EPA has asked for Governors to recommend non-attainment areas by February 15, 2004*
- EPA must designate non-attainment areas by Dec. 15, 2004

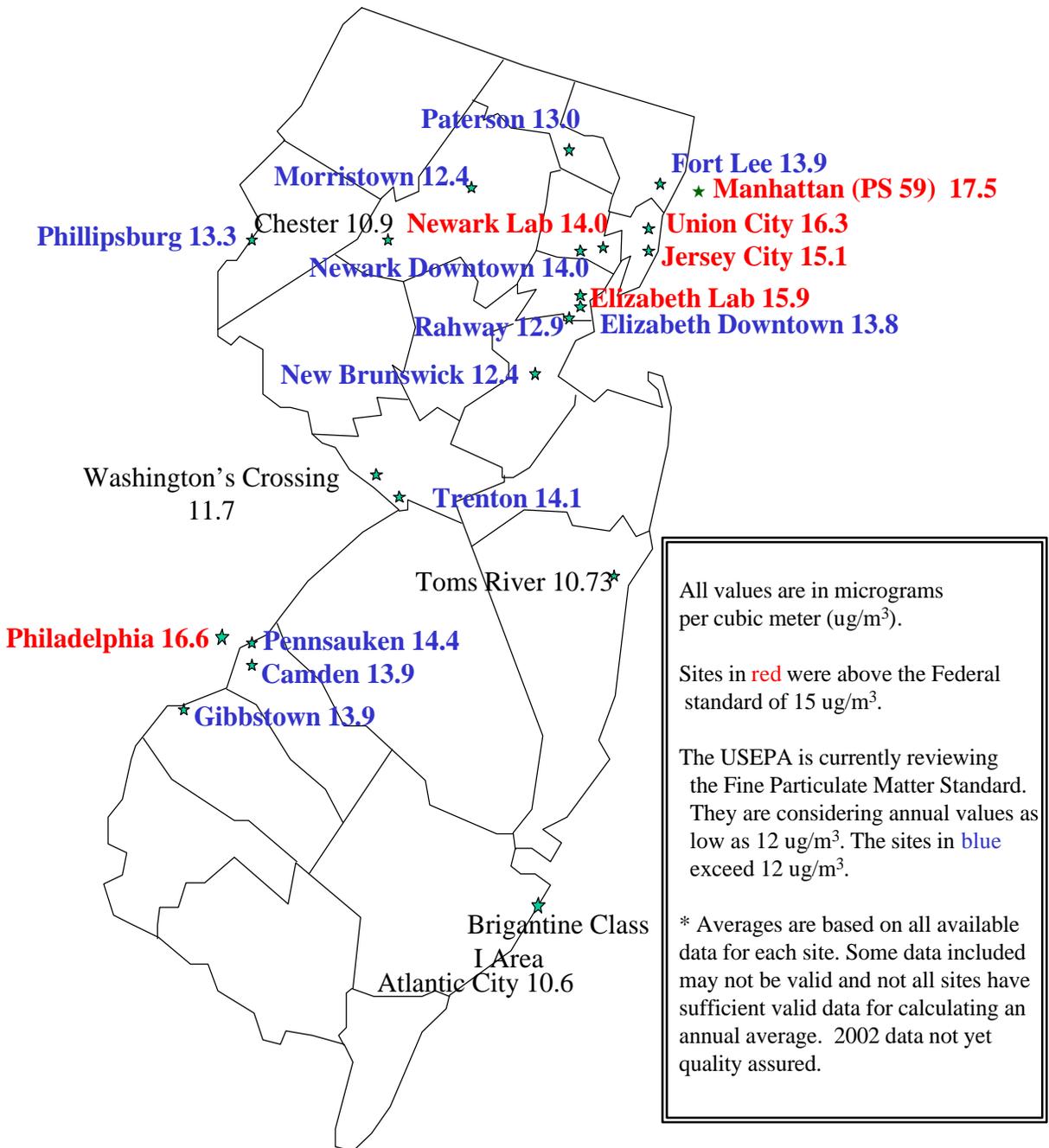
The Definition of a Non-Attainment Area

- An Area does not meet the Standard, or
- An Area that contributes to the problem in a **nearby** (downwind) area that does not meet the standard.
 - Can consider three geographic scales: Regional, County to County, Localized
 - The County Scale and Directly Emitted (Carbon) particles are the focus here.
- For fine particles, non-attainment boundaries must be set that include the violating areas and the nearby contributing areas (per 4/1/2003 USEPA guidance memo)

Annual Fine Particle Concentrations 3-Year Averages (1999-2001)

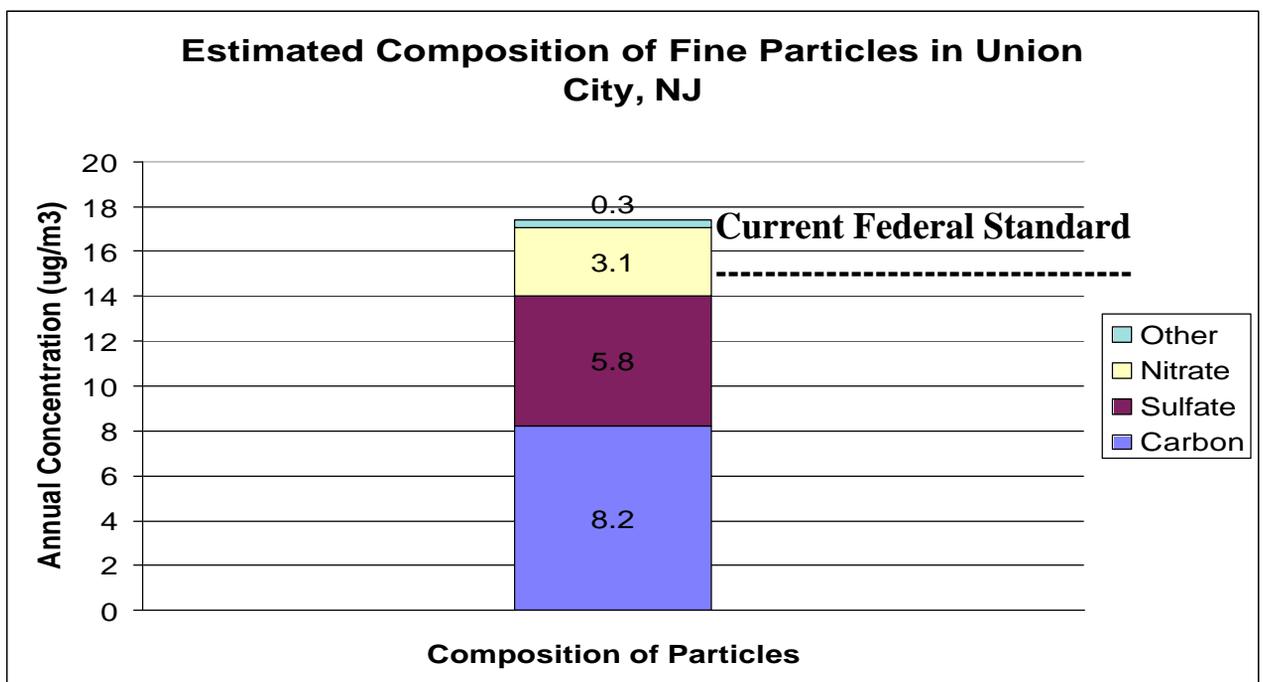


Annual Fine Particle Concentrations 3-Year Averages (2000-2002)*



The Composition of PM_{2.5} at Union City, NJ

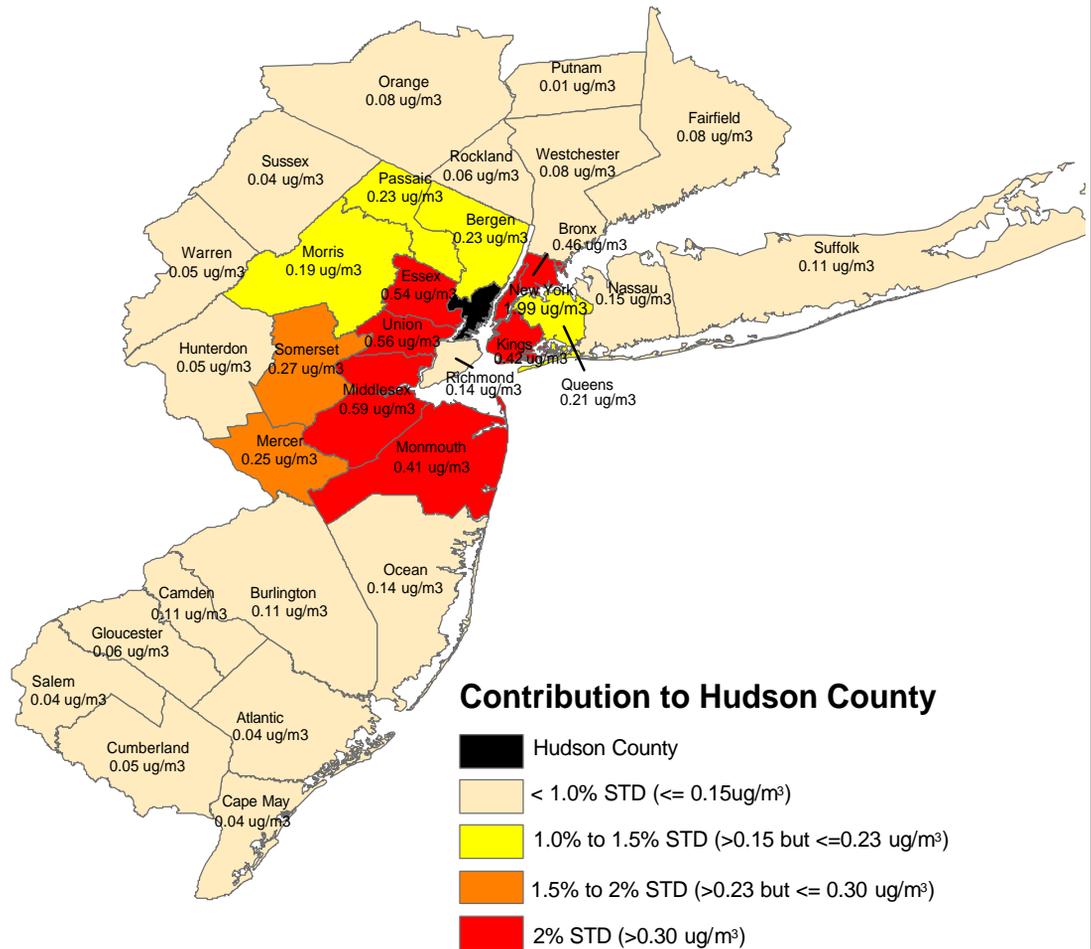
Derived from Monitored Data



Note: Carbon component (primarily from nearby sources) is higher than sulfate component (primarily from long range transport of power plant emissions)

Modeled Contributions to Hudson County Carbon Component of PM_{2.5}

(in micrograms per cubic meter)

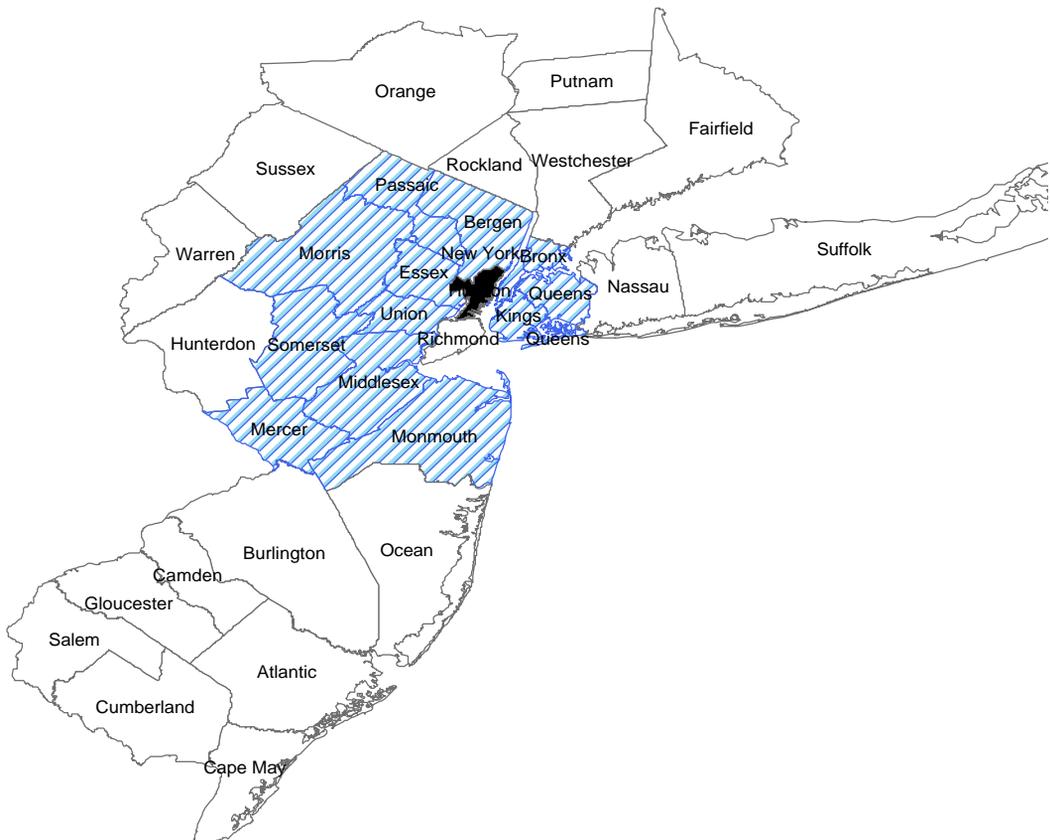


Modeled Contribution for Emissions from Monmouth County, NJ and Richmond County, NY is to Elizabeth, NJ Monitor

Option 1:

>1% of Annual Standard

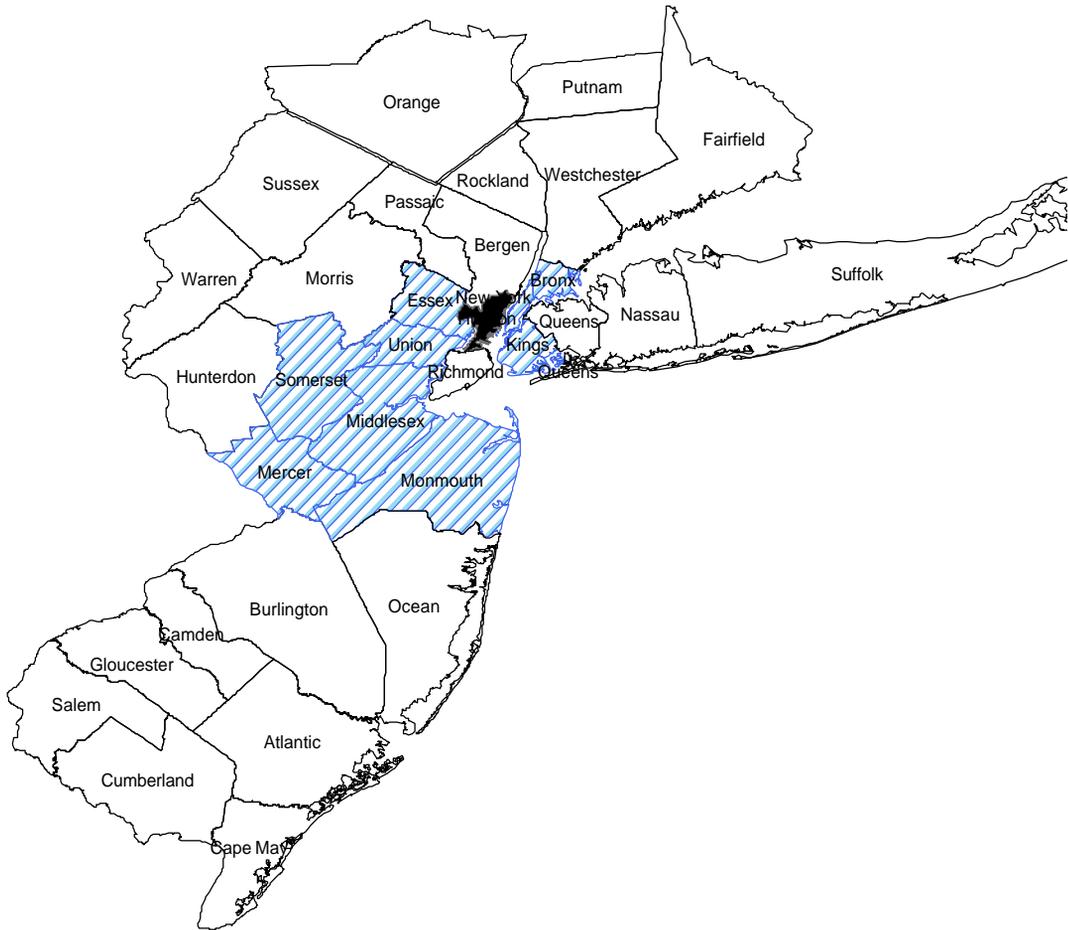
Captures 83% of the
 $8\mu\text{g}/\text{m}^3$ Carbon Component



Threshold for Inclusion = $0.15 \mu\text{g}/\text{m}^3$

Option 2: >1.5% Annual Standard

Captures 70% of the
8 ug/m³ Carbon Component

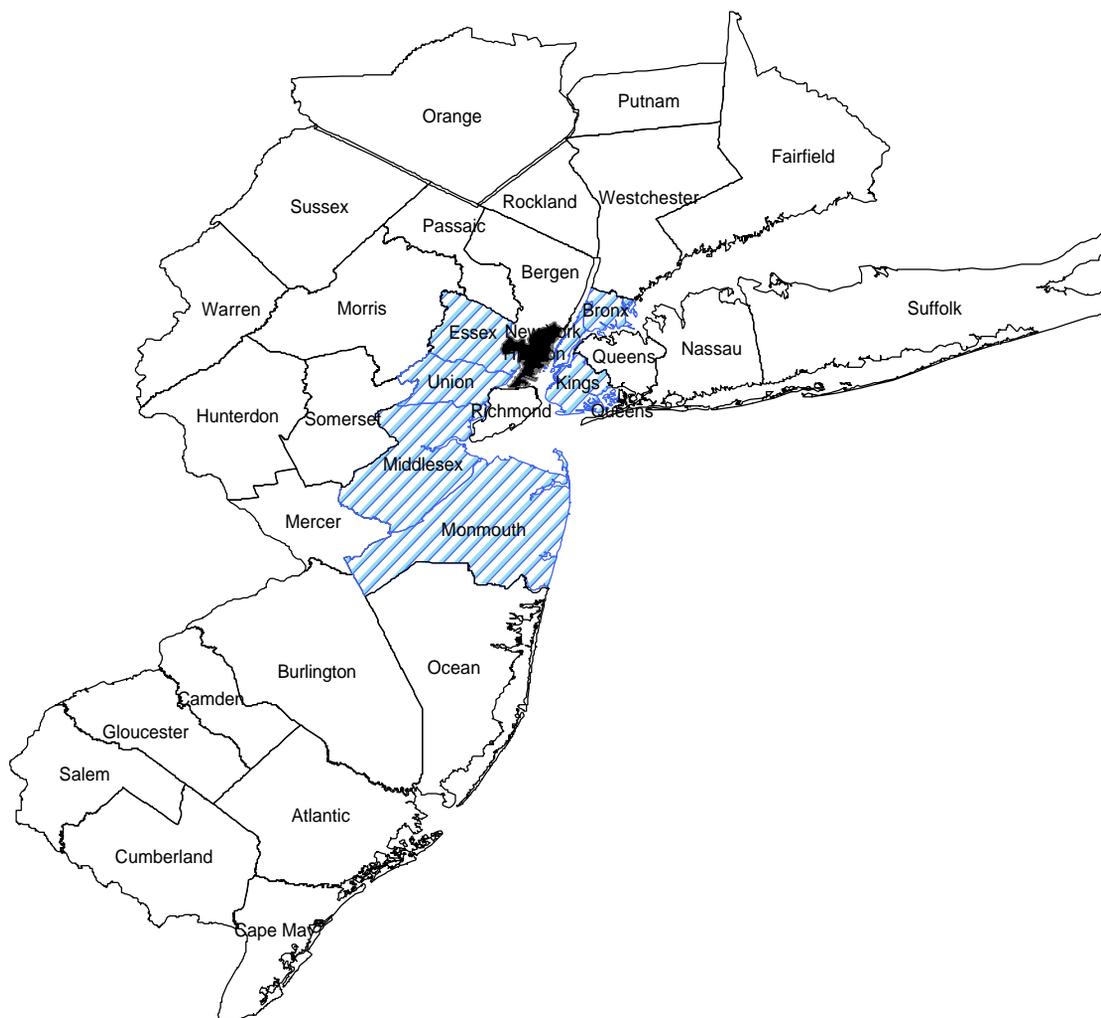


Threshold for Inclusion = 0.23 ug/m³

Option 3:

> 2% Annual Standard

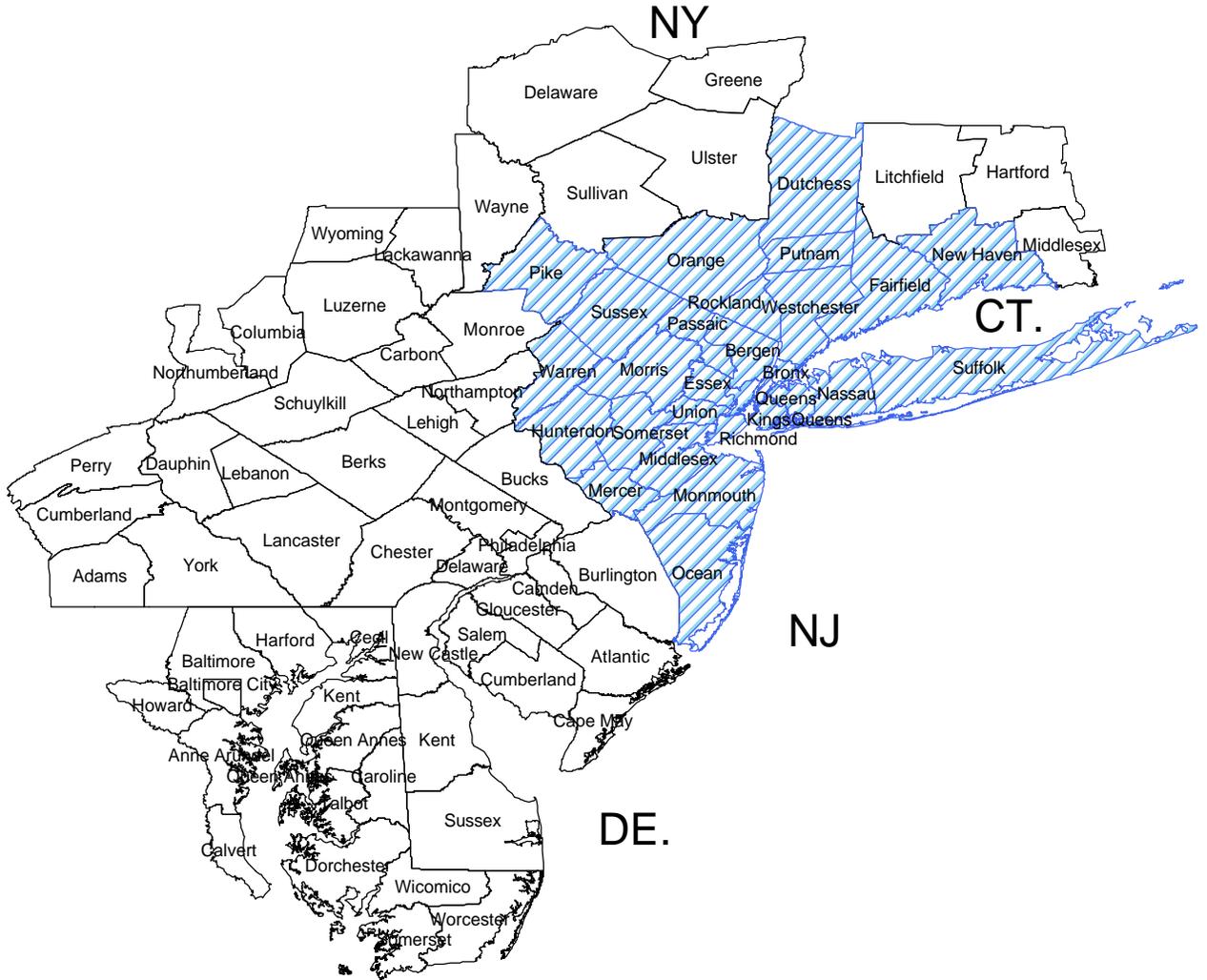
Captures 63% of the
8ug/m³ Carbon Component



Threshold for Inclusion = 0.30 ug/m³

Option 4: The USEPA Default Full CMSA Area

Captures 94% of the 8 ug/m³ Carbon Component



NY/NJ/CT CMSA

- Not Part of CMSA
- CMSA Area by 2000 Census

What does it mean to be designated “non-attainment”?

- Counties included in a non-attainment area will be identified as areas with poor air quality.
- Any large facility (e.g., a power generating plant or an industrial facility) wishing to locate within a non-attainment area would be subject to offset requirements and more stringent emission control requirements.
- Being part of a non-attainment area provides for greater authority to implement control measures.
- Being part of a non-attainment area allows the counties exceeding the standard and the counties contributing to those exceedences to work together towards attainment and cleaner air.



State of New Jersey
Department of Environmental Protection
Division of Air Quality
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625-0418

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner

March 23, 2004

John Filippelli
USEPA Region II
Air Programs Branch
290 Broadway, 25th Floor
New York, NY 10007-1866

Dear Mr. Filippelli:

This letter is in response to a telephone conversation between Mr. Ken Fradkin of your staff and Mr. Ray Papalski of my staff on March 19, 2004. In that conversation, New Jersey was asked to provide supplemental information in support of our position that southern New Jersey not be associated with the Philadelphia non-attainment area. I've enclosed a letter written to Mr. J. Wick Havens of the Pennsylvania Department of Environmental Protection on February 6, 2004. This letter articulates New Jersey's position and data concerning the attainment status of southern New Jersey. Due to the low emissions in southern New Jersey and the wind directions in the Philadelphia Region arising primarily from the west, we believe that southern New Jersey should not be located in the Philadelphia non-attainment area.

Should you have any questions, please call me at (609) 292-6722.

Sincerely Yours,

A handwritten signature in cursive script that reads "Bob Stern".

Bob Stern, Acting Manager
Air Quality Planning



State of New Jersey

Department of Environmental Protection
Division of Air Quality
Air Quality Management
P.O. Box 418
Trenton, New Jersey 08625-0418

James E. McGreevey
Governor

Bradley M. Campbell
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February 6, 2004

J. Wick Havens
Chief, Air Resource Management Division
Bureau of Air Quality
P.O. Box 8468
Harrisburg, PA 17105-8468
e-mail (preferred) - jhavens@state.pa.us

Dear ~~Mr. Havens~~ ^{Wick}:

I appreciate the opportunity to review the January 9, 2004 document entitled "Proposed Recommendations to EPA for Fine Particulate (PM_{2.5}) Attainment/Nonattainment Areas." The proposal details the Commonwealth of Pennsylvania's proposed recommendations for PM_{2.5} non-attainment/attainment area boundaries. I would like to share with you some of the thoughts that went into developing New Jersey's approach for designating the PM_{2.5} nonattainment area, for your consideration in developing Governor Rendell's recommendations.

New Jersey and Pennsylvania share concerns over three geographic areas. These areas are:

- the Philadelphia-Camden-Vineland, PA-NJ-DE-MD Combined Statistical Area (CSA) which includes 5 counties in Southern New Jersey (i.e., Burlington, Camden, Cumberland, Gloucester and Salem).
- New York-Newark-Bridgeport, NY-NJ-CT-PA CSA, which includes Pike County, Pennsylvania; and
- the Allentown-Bethlehem-Easton PA-NJ Metropolitan Statistical Area (MSA), which includes Warren County, New Jersey.

For reference purposes, I have enclosed a map showing the boundaries of these three areas (see Figure 1).

Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA

As stated in your proposal, the Commonwealth recommendations are established "based primarily on the June 10, 2003, issued definitions of Core Based Statistical Area (CBSA) boundaries and Combined Statistical (CSA) Area boundaries." The Commonwealth's proposal recommends the inclusion of all the counties in the USEPA's proposed 8-hour ozone nonattainment area in a proposed Philadelphia PM_{2.5} nonattainment area. This would include the New Jersey counties of Atlantic, Burlington, Camden, Cape May,

Cumberland, Gloucester, Mercer and Salem. The proposal therefore includes three New Jersey counties (Atlantic, Cape May and Mercer Counties) that are outside the CBSA/CSA.

In formulating New Jersey's recommendation options for PM_{2.5} nonattainment areas, we first reviewed our monitoring data, and determined that the only exceedances of either PM_{2.5} standard were in the Northeastern part of New Jersey. Based on this determination, we included the counties where those exceedances occurred in the all proposed nonattainment area options. From there, we mapped out various proposed nonattainment areas options in Northern New Jersey based on several different thresholds for contribution to those exceedances. Then the State addressed the inherent scientific differences between ozone and PM_{2.5} that would necessitate that their nonattainment area boundaries be addressed separately and differently. Ozone's precursors (VOC and NO_x) and formation chemistry are fundamentally different from direct particle emissions, which are the nearby component of PM_{2.5} that is the more relevant component for PM_{2.5} designation. In this way, we determined that the nonattainment areas for these two pollutants must be addressed separately. While making the PM_{2.5} nonattainment area identical to the 8-hour nonattainment area might further "allow for integrated air quality planning among a group of counties and states that have experience working together to improve air quality," New Jersey is not using this as the sole basis for the designation of a nonattainment area. Instead, we focused on the air quality considerations of the area in question as the basis for the designation.

After establishing that the areas for ozone and PM_{2.5} should be different, New Jersey determined that any final recommendation had to be consistent with the definition of a nonattainment area as provided in the Clean Air Act. Specifically, Section 107(d)(1)(A)(i) of the Clean Air Act defines a nonattainment area as

any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

As stated previously, currently no area of Southern New Jersey exceeds either the annual or 24-hour PM_{2.5} NAAQS. In addition, there is no evidence that any area of Southern New Jersey is contributing to the violations of that standard in Philadelphia or any other area of Pennsylvania. This argument is strengthened by the fact that PM_{2.5} emissions in Southern New Jersey are low compared to those in Philadelphia, and the wind direction in the Philadelphia region is primarily from west to east. As such, New Jersey is not recommending a nonattainment area for Southern New Jersey. If the Commonwealth has evidence showing Southern New Jersey's contribution to the Philadelphia exceedances, similar to the "1 percent of the standard" approach New Jersey took to establish contribution to the Northern New Jersey exceedances, we would be interested in reviewing that material.

Northern New Jersey-New York City

Pennsylvania's proposal excludes Pike County from the Northern New Jersey-New York City PM_{2.5} nonattainment area. We reached the same conclusion, because we believe that Pike County contributes less than 1 percent to the monitored exceedances.

Mercer County, New Jersey contributes more to exceedances in the Northern New Jersey-New York City nonattainment area than to exceedances in the Philadelphia nonattainment area. For that reason, if Mercer County were included in any nonattainment area, our approach would put it in the Northern New Jersey-New York nonattainment area.

Allentown-Bethlehem-Easton PA-NJ MSA

New Jersey's ambient air monitoring site in Phillipsburg, New Jersey, which is in Warren County, indicates that the area is meeting the current 24-hour and annual NAAQSs. For that reason, we again came to the same conclusion as Pennsylvania that the Pennsylvania portion of this MSA be designated as attainment.

As always, New Jersey will continue to work with the Commonwealth to solve our air quality problems. We would be happy to meet and discuss this issue with you in more detail at your convenience.

Sincerely,



Robert Stern
Acting Bureau Chief
Air Quality Planning, NJDEP

c: S. Wolfe
B. O'Sullivan
C. Salmi
H. Geduldig
T. Key
C. Schell

Figure 1: Relevant Geographic Areas

